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A PLAN OF A COURSE OF CHEMICAL LECTURES,

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Non fingendum aut excogitandum, ſed inveniendum quid natura faciat aut ferat. BACON.

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173. Mercury changed into a black powder by agitation.

174. Mercury purified from adulteration by diſtillation.

The effects of iron filings in the purification of mercury.

175. Mercury changed into a red powder by calcination.

Mercurius calcinatus per ſe.

176. Mercury boiled in water.

177. Mercury combined with oil of vitriol.

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178. Mercury combined with the nitrous acid.

The ſolution cryſtalliſed.

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179. The vitriolic acid } added to the preceding ſolution.
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180. Action of the marine acid on mercury.

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181. Preparation of mercurius dulcis: calomelas: aquila alba, &c.

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182. Of the adulteration of corroſive ſublimate and calomel with arſenic.

183. Mercury precipitated from a ſolution of corroſive ſublimate in water,

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184. A white precipitate of mercury by adding a ſolution of common ſalt to a ſolution of mercury in the nitrous acid.

185. Mercury diſſolved,

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186. Method of reviving the mercury from the preceding preparations.

187. Mercury united with ſulphur.

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188. Cinnabar made without heat.

189. M. le Comte de la Garaye's tincture of mercury in ſpirits of wine.

190. Effects of mercury upon arſenic.

191. Of amalgams.

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192. Regulus of antimony.

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193. Flowers of regulus of antimony.

194. Calcination of regulus of antimony and

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195. Regulus of antimony melted with alcalies.

196. Action of the vitriolic acid
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197. A mixture of corroſive ſublimate, and of regulus of antimony ſublimed.

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198. Regulus of antimony and nitre mixed together in the proportion of 1 to 3, and deflagrated.

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199. Sulphur unites with regulus of antimony by fuſion.

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200. Crude antimony roaſted, calcined to an aſh colour, and vitrified.

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201. Preparation of regulus of antimony from crude antimony by various methods.

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202. Crude antimony and nitre deflagrated in various proportions.

Crocus antimonii medicinalis.

Crocus antimonii mitior.

Crocus metallorum, or hepar antimonii.

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203. Crude antimony united with alcalies by fuſion.

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204. The laſt compound diſſolved in water,

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Precipitate from this ſolution by an acid.

Sulphur auratum antimonii.

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205. Action of the vitriolic acid
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206. A mixture of corroſive ſublimate and crude antimony ſublimed.

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207. Calx of antimony ſeparated from diluted butter of antimony.

Pulvis algaroth: mercurius vitæ.

208. Action of vegetable acids on antimony.

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Tartar emetic by ſeveral methods.

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209. Tincture of antimony in ſpirits of wine.

210. The medical virtues of antimonial preparations in general.

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211. Natural hiſtory of biſmuth.

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213. Biſmuth united with ſulphur.

214. Biſmuth united with metals.

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215. Properties of zinc.

216. Sublimation of zinc in cloſe veſſels.

217. Slow calcination of zinc.

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Flowers of zinc: lana philoſophorum: pompholix.

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218. Action of acids upon zinc.

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219. Zinc deflagrated with nitre.

220. Zinc will not unite with ſulphur or hepar ſulphuris.

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221. Zinc united with metals,

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222. Natural hiſtory of the ores of zinc.

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223. Ores of cobalt.

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224. Regulus of cobalt obtained from zaffre.

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225. Regulus of cobalt and its calces diſſolved in acids.

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226. Regulus of cobalt fuſed with ſulphur.

227. Combinations of regulus of cobalt with other metals.

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228. Ore of nickel.

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229. Nickel diſſolves eaſily in aqua fortis, and aqua regia,

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230. Nickel deflagrates weakly with nitre.

231. Nickel united with ſulphur, and with metals.

232. Of manganeſe.

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233. Natural hiſtory of lead ores.

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234. Lead volatilized by heat.

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235. Plumbum uſtum melted.

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236. Lead converted into maſticot and minium.

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237. Revivication of lead from glaſs.

238. Action of the vitriolic acid
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239. Methods of combining the marine acid with lead,

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240. Precipitations from the ſolutions of lead in acids.

241. Preparation of white lead, and

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242. Uſes of lead in refining the ores of gold and ſilver.

243. Action of oils upon lead, and its calces.

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244. Lead combined with ſulphur.

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245. Action of acids on lead ore.

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246. Sugar of lead decompoſed by a ſolution of ſulphur.

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247. Adulterations of oils and wine by lead diſcovered.

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248. Lead mixed with metals.

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249. Medical and mechanic uſes of lead.

250. Of black lead.

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251. General properties of copper.

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252. Action of vitriolic acid on copper.

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253. Copper diſſolved in acid of nitre.

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254. Vegetable acid combined with copper.

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Cryſtals of verdigris diſtilled.

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255. Precipitations of copper.

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Detonation of cupreous nitre.

256. Copper combined with ſulphur,

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257. Copper fuſed with arſenic, tin, zinc, &c.

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258. Natural hiſtory of copper.

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259. General properties of iron.

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Welding, inflammation, calcination of iron.

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260. Iron diſſolved in vitriolic acid.

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261. Action of the nitrous acid }
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262. Action of the marine acid on the calces of iron.

263. Combinations of the vegetable acids with iron.

264. Precipitations of iron.

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The colouring matter of Pruſſian blue extracted by an alcali.

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265. Effects of nitre and ſalt ammoniac on iron.

266. Sulphur combined with iron.

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267. Mixtures of iron, and other metals.

268. Natural hiſtory of iron.

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270. Action of the vitriolic acid } on tin.
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271. Marine acid combined with tin.

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272. Action of vegetable acids on tin.

273. Tin combined with ſulphur.

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274. Properties and uſes of mixtures of tin, and other metals.

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275. Uſes of tin in medicine.

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276. The diſtinguiſhing properties of gold and ſilver.

Their ductility, malleability, and

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277. Of the calcination of the perfect metals by acids.

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278. Peculiar properties of ſilver.

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279. Action of large mirrours, or lenſes on ſilver.

280. Silver corroded by the vitriolic acid.

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281. Silver diſſolved in ſpirit of nitre.

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282. Action of the marine acid on ſilver.

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283. Silver diſſolved by vegetable acids, and by alcaline ſalts.

284. Variety of methods of ſeparating ſilver from its combination with the acids.

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285. Sulphur united with ſilver.

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286. Properties of the combinations of ſilver with metals.

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287. Natural hiſtory of ſilver.

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288. Peculiar properties of gold.

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289. Action of large burning glaſſes on gold.

290. Gold in its metallic ſtate reſiſts the action of the acids when unmixed.

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291. Gold diſſolves in aqua regia.

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292. Aurum fulminans deprived of its fulminating quality.

293. Calces of gold diſſolved by vegetable acids, and

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294. Gold ſeparated from its ſolution in aqua regia by æther.

295. Gold precipitated from the ſame ſolution,

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296. Effects of ſalt ammoniac, nitre, and borax, on the colour of gold.

297. Gold diſſolved by hepar ſulphuris, and

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298. Gold amalgamated with mercury.

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299. Combinations of gold with tin, copper, &c.

300. Gold refined by

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301. Natural hiſtory of gold.

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302. Natural hiſtory of Platina.

Its purification, and general properties.

303. Action of fire, of nitre, and of lead, on platina.

304. Platina diſſolved in aqua regia.

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305. Platina diſſolved in liver of ſulphur.

306. Platina fuſed with metals.

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307. Different ſpecies and qualities of waters.

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308. Of mineral waters impregnated with

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309. Natural hiſtory of bituminous ſubſtances.

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310. Method of analyſing the bitumens,

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314. Amber diſtilled.

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315. Rectification of the oil of the laſt proceſs.

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316. Amber examined by menſtrua.

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318. Of the exiſtence of nitre, &c. in vegetables.

319. The influence of light on growing vegetables.

320. The principles into which vegetable ſubſtances are reſolvable by fire.

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322. Charcoal,

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323. Analyſis of vegetables in the open air.

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324. General properties of Gums.

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325. Methods of procuring gums from vegetable ſubſtances.

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328. Eſſential oils diſſolved in ſpirits of wine.

329. The qualities of balſams and reſins compared with thoſe of eſſentials oils.

330. Diſtillation of turpentine.

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335. Rough camphor refined,

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337. Camphor diſſolved in acids, and in ſpirits of wine.

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340. Expreſſed oils impregnated with the odorous principle of vegetables.

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343. The parts of vegetables in which theſe oils chiefly reſide.

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344. The nature of the ſaline ſubſtances contained in the juices of plants.

345. Of the exiſtence of the fixed alcali in vegetables.

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347. Its diſtinguiſhing qualities.

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352. General obſervations on the vegetable preparations, by expreſſion and inſpiſſation, by infuſion, maceration, digeſtion, and decoction in water, by ſolution in wine, ſpirits, &c. by evaporation of the diſſolving menſtrua, and by diſtillation.

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353. Its theory: good dyes: falſe dyes.

354. Of the dying of wool, ſilk, cotton, &c.

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355. Aqueous and ſpirituous decoction of ſeveral ſorts of wood.

356. Colouring matter of ſome vegetables precipitated by alum, ſolution of tin, &c.

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357. The vegetable ſubſtances which are ſubject to this ſort of fermentation.

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358. The neceſſity of heat, and moiſture to the fermentation.

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362. Circumſtances in which this fermentation differs from the former.

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364. Method of diſcovering whether vine-

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365. The effects of heat on vinegar.

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366. Vinegar combined with fixed alcalies.

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367. Vinegar combined with volatile alcali.

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368. The putrid fermentation of vegetables.

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369. Analyſis of putrified vegetables.

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370. The nature of ferments.

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372. Compariſon of the properties of vegetable and of animal ſubſtances.

373. Putrefaction of animal matters.

Methods of promoting or of preventing it.

374. Analyſis of the ſolid parts of animals.

Bones, horns, &c. diſtilled.

Phlegm.

Volatile alcali.

Empyreumatic oil.

Caput mortuum.

375. Rectification of the empyreumatic oil.

Properties of the oleum animale Dippelii.

376. Action of hot water on the ſolid parts of animals.

Glue, iſinglaſs, ſize, &c.

Separation of phoſphoric acid from bones and horns, by Scheele's method.

377. Compariſon of the fluid and ſolid parts of animals.

378. Analyſis of blood by diſtillation.

379. Spontaneous reſolution of the blood into ſerum and craſſamentum.

The ſerum coagulated by heat, by acids, and by ſpirits of wine.

The craſſamentum reſolved into coagulable lymph and red globules.

Of the colour of the blood, and the

Changes it undergoes by putrefaction.

380. The neceſſity of excrementitious fluids in animal bodies.

381. Perſpiration.

382. Urine.

Its analyſis by fire.

Freſh urine diſtilled with lime.

Variety of ſaline matters contained in urine.

The fuſable ſalt of urine.

Phoſphorus made by ſeveral methods.

Its rectification, and

General properties.

Action of heat and of menſtrua on phoſphorus.

Of the acid of phoſphorus.

383. Analyſis of putrid urine.

384. Of the fæces alvinæ.

385. Of fat, ſuet, &c.

386. Of wax and ſpermaceti.

Bleaching and colouring of wax.

Purification of ſpermaceti.

387. Analyſis of milk, and

Of eggs.

Expreſſed oil from the yolks of eggs.

388. Of the eſſential oil, volatile acid, and expreſſed oil of ants.

GEOFFROY's TABLE

1	2	3	4	5	6	7	8
Acids in General	Acid of Sea Salt	Acid of Nitre	Acid of Vitriol	Abſorbent Earths	Fixed Alcaline Salts	Volatile Alcaline Salts	Metalline Subſtances
Fixed Alcaline Salts	Tin	Iron	Phlogiſton	Acid of Vitriol	Acid of Vitriol	Acid of Vitriol	Acid of Sea Salt
Volatile Alcaline Salts	Regulus of Antimony	Copper	Fixed Alcaline Salts	Acid of Nitre	Acid of Nitre	Acid of Nitre	Acid of Vitriol
Abſorbent Earths	Copper	Lead	Volatile Alcaline Salts	Acid of Sea Salt	Acid of Sea Salt	Acid of Sea Salt	Acid of Nitre
Metalline Subſtances	Silver	Mercury	Abſorbent Earths		Diſtilled Vinegar		Diſtilled Vinegar
	Mercury	Silver	Iron		Sulphur		
			Copper				
			Silver				
	Gold						

# of AFFINITIES.

9	10	11	12	13	14	15	16
lphur	Mercury	Lead	Copper	Silver	Iron	Regulus of Antimony	Water
Fixed Alcaline Salts	Gold	Silver	Mercury	Lead	Regulus of Antimony	Iron	Spirits of Wine
Iron	Silver	Copper	Calamine	Copper	Silver, Copper, Lead	Silver, Copper, Lead	Neutral Salts
Copper	Lead						
Lead	Copper						
Silver	Zinc						
Regulus of Antimony	Regulus of Antimony						
Mercury							
Gold							

[illegible]